

Note on the Habits of the Northern Shrike (*Lanius borealis*).—On the 9th of March, 1892, at Concord, Mass., I saw a Northern Shrike (*Lanius borealis*) capture, kill and dispose of a meadow mouse. The bird's behavior and methods were so interesting and, in some respects, peculiar that I submit the following account of the episode in nearly the words in which I find it described in my notes written at the time.

As I was watching a Shrike it flew from the topmost spray of a small maple into some alders and alighted on a horizontal stem about a foot above the level of the surrounding snow; but directly beneath, as I afterwards found, the snow had thawed quite down to the ground leaving a trench about two feet deep by three or four inches wide into which the Shrike, after peering intently for a moment, suddenly dropped, with fluttering wings and wide spread tail. Within a second or less it reappeared dragging out a field mouse (*Arvicola riparius*) of the largest size. The moment it got the mouse fairly out on the hard surface of the snow it dropped it, apparently to get a fresh hold (as nearly as I could make out it had held it, up to this time, by about the middle of the back). The mouse, instead of attempting to regain its runway, as I expected it would do, instantly turned on its assailant and with surprising fierceness and agility sprang directly at its head many times in succession, literally driving it backward several feet, although the Shrike faced its attacks with admirable steadiness and coolness, and by a succession of vigorous and well aimed blows prevented the mouse from closing in. At length the mouse seemed to lose heart and turning, tried to escape. This sealed its fate, for at the end of the second leap, it was overtaken by the Shrike who caught it by the back of the neck and began to worry it precisely as a terrier worries a rat, shaking it viciously from side to side, at the same time dragging it about over the snow which, as I could plainly see through my glass (I was standing within ten yards of the spot), was now freely stained with blood. I could also see the Shrike's mandibles work with a vigorous, biting motion, especially when it stopped the shaking to rest for a moment. When it finally let go its hold the mouse was evidently dead. The Shrike now looked up and seeing me jumped on the mouse with both feet and flew off *bearing it in its claws*. Its flight was slow and labored. In fact it did not succeed in rising more than two feet above the snow and went less than two hundred feet before relighting. As I again approached it was tearing at the mouse but it stopped as soon as it saw me and flew some fifty yards further, dropping, this time, into a thicket of alders where it laid the mouse on the snow and resumed its meal. Shortly afterwards it raised the mouse to a branch a few inches above the snow and doubling it over this so that the head hung down on one side, the tail on the other, left it for awhile and alighting above it sat for several minutes nearly motionless. Then it returned to the mouse and taking it by the head dragged it up along the branch until it came to an acute-angled fork a foot or more above the snow. Through this fork it dropped the body;

then, keeping the head above the twigs, it drew the neck firmly into the base of the fork, at the same time stepping backwards and tugging at the head with all its strength, frequently beating its wings vigorously to add to the force of the pull. This task completed to its apparent satisfaction (the entire operation consumed at least three or four minutes), the bird began eating again but in a somewhat listless manner, making long pauses between the mouthfuls. Evidently its appetite was about sated. At length it flew into a neighboring tree where it sat for a long time dressing its feathers—a decidedly necessary attention, for, as I could plainly see through my glass (I now stood within fifteen or twenty feet), its plumage was in sad condition; the feathers of the forehead and throat were matted and soaked with blood, the breast was reddened perceptibly and the bill was almost wholly of a carmine tint. After getting itself into somewhat better trim it flew into some young pines.

I now examined the mouse. The Shrike had not touched any part of the body, but the skin had been torn away from the entire neck, and the muscles and other soft tissues were almost entirely gone from the shoulders and sternum to the base of the skull. The body was untouched and the skull showed no sign of injury, but the cheek muscles had been eaten pretty cleanly away, as had also the entire throat, with the tongue. Both eyes were whole and in their sockets. This examination confirmed the conviction which I formed while watching the Shrike and mouse struggling together, viz., that the bird killed the mouse partly by *throttling*—that is by choking and shaking it—and partly (perhaps chiefly) by cutting its neck open on one side. No attempt was made to stun the mouse by striking at its skull, such blows as I saw delivered being evidently intended to keep the mouse at bay until the Shrike could close with it and get it by the neck.

While I was examining the mouse the Shrike began uttering a mewling cry among the pines. This seemed to be a remonstrance directed at me. I went to the spot and found the bird sitting low down amid dense pine foliage looking rather dumpy and unhappy. About an hour later I returned to the alders and examined the mouse again. As far as I could detect it had not been touched in my absence. I did not see the Shrike again.

The next day at 10 A. M., I visited the alder thicket but the mouse was gone. As there were no tracks in the snow beneath where it had hung I concluded that the Shrike must have returned and removed it.—
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The Carolina Wren in Winter in Mercer County, Pennsylvania.—On Jan. 1, 1891, I shot a male Carolina Wren (*Thryothorus ludovicianus*) and observed another of the same species. For several weeks previously the ground had been covered with snow, which, however, was rapidly melting at this time. The bird was in full song and appeared not at all